

REMARKS

The applicants' attorneys appreciate the Examiner's comments.

Claim 1 has been corrected. Specifically, the word control has been replaced with central to correct an obvious error. Entry of the amendment is requested.

The Examiner has found the arguments of October 12, 2004 not persuasive because a) "Gardner et al. disclose ion of a second conductivity type diffusing into first and second epitaxial layer not reaching the substrate (Fig. 4; col. 8, lines 7-25)"; and b) "Gardner et al. teaches form [sic] the implant in a central region of the epitaxial layer (Fig. 4-7)".

Region 26 as shown in Gardner is not of second conductivity type. Specifically, Gardner teaches region 26 to be of N type variety when a device formed in region 20 is a P-MOS. As set forth in col. 10, lines 5-8, to form a P-MOS device, region 20, in which region 26 is formed, is also of N type variety. Thus, implant 26 is of the same conductivity type as its surrounding, and not of "a second conductivity" as called for by claim 1.

Furthermore, region 26 is not centrally located. The following excerpt from Gardner discusses the preferred position of region 26:

Punchthrough stop 26 is preferably located in second epi layer 14, and more preferably at a depth intermediate between the depth of the source/drain regions and the lower surface of second epi layer 14, and still more preferably near the bottom of the source/drain regions.

The excerpt does not at all state that region 26 should be near a "central" region as called for by the claims. The Examiner appears to rely on the figures to establish the central location of regions 26. It should be noted that since Gardner does not state that the figures are drawn to scale, the Figures cannot be used for the purpose of establishing the precise location of regions 26. However, even if the figures could be used for such a purpose, it is quite clear from the figures that region 26 is off-center in that most of the body of region 26 is located in epitaxial layer 14, and a small portion is found in epitaxial layer 12.

In addition, the claims call for "the total charge of each of said pedestals being approximately equal to the total charge of the volume of said first and second layers which

surrounds said pedestals". Gardner does not disclose this relationship. Rather, Gardner only calls region 26 as "punch through stop 26". Col. 8, lines 26-27. The combination of Gardner with Onishi, therefore, would not result in the subject matter of the claims.

Furthermore, generically stated for simplicity, the pending claims are directed at a method for forming pedestals which require, forming one layer, implanting dopants, forming another layer, and then applying a thermal step to diffuse the dopants. Gardner teaches forming two epitaxial layers and then implanting to form region 26. Thus, the combination of Gardner and Onishi would result in a method in which two epitaxial layers are first formed, and then implanted, which is not the subject matter of the claims.

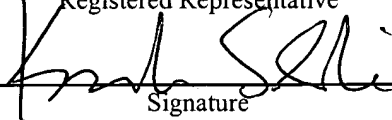
Finally, it should be noted that Onishi requires the pedestals to reach the substrate. No suggestion or motivation has been articulated for the record to modify Onishi according to Gardner. Without such suggestion or motivation a *prima facie* case of obviousness is lacking.

For all of the reasons set forth above, reconsideration of the final rejection is requested, and allowance is solicited.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on February 17, 2005

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February 17, 2005

Date of Signature

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